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A SCANA COMPANY

October 31, 2014
RC-14-0178

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Attn: S. A. Williams

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
LICENSE AMENDMENT REQUEST – LAR-12-04269
LICENSE BASIS CHANGES IN STEAM GENERATOR
TUBE RUPTURE ANALYSIS
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

References:
1. SCE&G Letter from Thomas D. Gatlin to NRC Document Control Desk, License Amendment Request – LAR-12-04269, "License Basis Changes in Steam Generator Tube Rupture Analysis," dated August 27, 2014 [ML14245A408]

2. NRC Letter from Shawn A. Williams to Thomas D. Gatlin, "Virgil C. Summer Nuclear Station, Unit No. 1 – Request for Additional Information Regarding License Basis Changes in Steam Generator Tube Rupture Analysis (TAC No. MF466)," dated October 1, 2014 [ML14268A096]

South Carolina Electric & Gas Company (SCE&G), acting for itself and as agent for South Carolina Public Service Authority pursuant to 10 CFR 50.90, submitted License Amendment Request (LAR) per Reference 1 concerning license basis changes in the steam generator tube rupture analysis. NRC review of this request determined that additional information was required and a request for additional information (RAI) was issued per Reference 2. This letter's Attachment I contains SCE&G's response to these RAIs.

VCSNS, upon completion of additional engineering evaluations, will provide a response to RAI No. 5 by January 30, 2015.

A001
NRR

This letter contains no regulatory commitments.

If you have any questions regarding this submittal, please contact Mr. Bruce L. Thompson at (803) 931-5042.

I certify under penalty of perjury that the foregoing is correct and true.

10/31/14 — Executed on

Thomas D. Gatlin

TS/TDG/rp

Attachment I: VCSNS Response to Request for Additional Information
Attachment II: Follow-up Obligation

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VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

ATTACHMENT I

VCSNS RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the Virgil C. Summer Nuclear Station License Amendment Request (LAR), LAR-12-04269, dated August 27, 2014, concerning the license basis changes required due to an update to the Steam Generator Tube Rupture (SGTR) analysis. The NRC staff has determined that the following request for additional information (RAI) is required to complete its review.

RAI No. 1

One of the reasons given by the licensee for the need to reanalyze the SGTR event was: "During plant simulator exercises, the operating crews are taking greater than 30 minutes to terminate primary to secondary break flow following a SGTR."

a. How long were the crews taking to terminate primary to secondary break flow following a SGTR?
b. What was the maximum time recorded?
c. How were these times taken into account in the updated analysis?

SCE&G Response

a. For validation purposes, actions to terminate primary to secondary break flow are complete when Reactor Coolant System (RCS) pressure has been reduced to, at, or below the ruptured Steam Generator (SG) pressure and Safety Injection flow to the RCS has been terminated. Times from prior simulator exercises ranged from approximately 33 minutes to approximately 50 minutes.
b. The maximum time recorded was approximately 50 minutes.
c. The recorded times indicated a need for procedure improvement and training. To support the License Amendment Request (LAR), procedure changes were implemented to achieve earlier break flow termination. The principal time savers were:

- In EOP-4.0, (E-3) Steam Generator Tube Rupture (SGTR), actions to isolate the ruptured SG were removed from the main body of the procedure and included in an attachment. This allows one main control board operator to isolate feedwater to, and steam from, the ruptured SG while other actions in preparation for RCS cooldown and depressurization are being performed by the remaining control room staff.

- In EOP-4.0 after the RCS cooldown and depressurization is complete, actions were added to confirm the Charging/Safety Injection (SI) pump mini-flow lines are aligned such that SI flow to the RCS can be terminated prior to other recovery actions to restore normal makeup and letdown.

RAI No. 2

Table 15 appears to reflect that all crews performed all actions in the simulator runs within the times assumed in the original analysis and within the overall 30 minute limit assumed in the original analysis.

a. Given that the licensee stated that, "... operating crews are taking greater than 30 minutes to terminate primary to secondary break flow following a SGTR", explain how these simulator runs can be assumed to be realistic.

b. Why was actual operating/training experience not used or, at least, included in the data?

SCE&G Response

a. The times provided in Table 15 of Attachment 1 to the LAR validate the key operator action assumptions outlined in Section 3.2.2.2 and Table 3 of the enclosure to the LAR. Each action is tied to a unique starting point such that the operator action time could be measured during simulator exercises. The times shown in Table 15 are based on actual simulator exercises. The sum of the Table 15 times does not reflect the overall duration of the exercise since the time from event initiation to reactor trip, the time to cooldown the RCS using the intact SGs and the time to depressurize the RCS are not included. If included, the cumulative times would exceed the current FSAR assumption that the operator identifies the accident type and terminates break flow to the ruptured SG within 30 minutes of accident initiation.

b. As indicated within Table 3 of the enclosure to the LAR, the transient times described above are calculated by LOFTRAN during performance of the supporting analyses. The equivalent times calculated by the simulator were not included in Table 15 of Attachment 1 to the LAR since the intent of the simulator exercises is to validate the assumed operator action times, not the transient response of the simulator. For the simulator exercises presented, the time from event initiation to SI termination ranged from approximately 31.1 to 34.3 minutes.

RAI No. 3

In Table 16, credit is taken for monitoring equipment status by means of lights. In the aftermath of the TMI accident, it was found that many of the status lights in the control room did not reflect the actual state of equipment, but rather were demand signals, that is, a simple reflection of the position of the control handle, not the actual equipment status.

a. For each instance where status lights are credited in Table 16, identify whether the light portrays actual equipment status or is simply a reflection of a demand signal.

b. For those that are demand-only, identify alternative instruments that reflect actual equipment status, such as flow indicators, valve limit switch position indicators, and others.

c. How are failed lights identified or prevented?

SCE&G Response

a. For all valve position indications listed in Table 16, the indicator lights reflect actual valve position based on limit switches on the valve. There are two types of valve position indication on the Main Control Board (MCB):

- Red Light – Green Light
  The valve is provided with a red light and a green light at the control switch to indicate valve position. Red light only indicates the valve is full open. Green light only indicates the valve is full closed. A red light and green light indicate the valve is somewhere in mid-stroke.
- Engineered Safeguard Features (ESF) Status Light
  The ESF Status Lights are separate from the valve control on the MCB. Each white status light panel is engraved with the valve number and position. If the status light is bright, the valve is in the engraved position. If the status light is dim, the valve is not in the engraved position.

b. Table 16 has been updated to reflect the type of valve position indication for each valve. Some valves have both.

c. There is no official Preventive Maintenance Task that drives a periodic change of MCB lights. Operators are trained, however, to check for failed light bulbs as a part of normal operator rounds. In the event a failed light bulb is found, the bulb is replaced or a maintenance work request is initiated and a tag is hung until the light bulb is replaced. MCB conditions, including light bulb status, are also reviewed at shift turnover. In addition, as part of Inservice Testing, all valves in Table 16 with remote position indicators are observed locally and compared to the remote indication at least once every two years to verify that valve operation is accurately indicated. Both directions of valve travel are verified.

Table 16. Equipment Credited for SGTR Mitigation in the VCSNS Emergency Operating Procedures [EOP(s)]

Item	Safety Grade (Y or N)	Comment	SGTR Function	Functional Remark
Pressurizer Level LI-459 LI-460 LI-461	Y (Loop)	Loops provide input to the Reactor Protection System (RPS). MCB indicators are RG 1.97, Category 1. (FSAR Figure 5.1-1, Sht. 2)	SGTR Identification RCS Depressurization SI Termination Criteria	1, 2 3 4
Pressurizer Pressure PI-455 PI-456 PI-457	Y (Loop)	Loops provide input to the RPS and Engineered Safeguard Features Actuation System (ESFAS). MCB PI-457 is RG 1.97, Category 2. (FSAR Figure 5.1-1, Sht. 2)	SGTR Identification SI Actuation	1, 2 5
Wide Range RCS Pressure PI-402 PI-403	Y (Loop)	Loops provide input to the Core Subcooling Monitor. MCB indicators are RG 1.97, Category 1. (FSAR Figure 5.1-1, Sht.1)	RCS Depressurization SI Termination Criteria Pressure	6 4
Wide Range RCS Tcold TI-410 TI-420	Y	Loops provide input to the Core Subcooling Monitor. MCB indicators are RG 1.97, Category 1. (FSAR Figure 5.1-1, Sht.1)	General	

Table 16. Equipment Credited for SGTR Mitigation in the VCSNS Emergency Operating Procedures [EOP(s)]

Item	Safety Grade (Y or N)	Comment	SGTR Function	Functional Remark
Wide Range RCS Thot TI-413 TI-423	Y	Loops provide input to the Core Subcooling Monitor. MCB indicators are RG 1.97, Category 1. (FSAR Figure 5.1-1, Sht.1)	General	
Feedwater Flow FI-476 FI-486 FI-496	Y	Loops provide input to RPS and FW Level Control System. MCB indicators are RG 1.97, Category 3. (FSAR Figure 10.4-12)	Ruptured SG Identification	1, 7
SG Narrow Range Level LI-474/484/494 LI-475/485/495 LI-476/486/496	Y	Loops provide input to the RPS. MCB indicators are RG 1.97, Category 1. Trend recorder for one level channel per SG is also available (L-476/486/496). (FSAR Figure 10.3-1)	Ruptured SG Identification SG Level Control	1, 7, 8 9
Steam Line Pressure PI-474/475/476 PI-484/485/486 PI-494/495/496	Y	Loops provide input to the RPS. MCB indicators are RG 1.97, Category 1. (FSAR Figure 10.3-1)	RCS Cooldown	10

Table 16. Equipment Credited for SGTR Mitigation in the VCSNS Emergency Operating Procedures [EOP(s)]

Item	Safety Grade (Y or N)	Comment	SGTR Function	Functional Remark
EF Flow FI-3561 FI-3571 FI-3581	Y	MCB indicators provide EF flow to each SG and are RG 1.97, Category 1. (FSAR Figure 10.4-6)	RCS Heat Removal SI Termination Criteria	11 4
Core Exit Thermo-couples TC-01 through 51	Y[12]	Output is displayed on plant computer. A backup display for 16 (4 per quadrant) is available on the Core Subcooling Monitor. Both are RG 1.97 Category 1. (FSAR Section 7.5.5)	Monitor RCS Cooldown	12
RCS Subcooling Monitor TM-499A(B)	N[13]	System displays saturation margin and core exit temperature. Subcooling, based on core exit thermocouples, is a RG 1.97 Category 2 indication. (FSAR Section 7.5.5)	SI Termination Criteria	4, 13

Table 16. Equipment Credited for SGTR Mitigation in the VCSNS Emergency Operating Procedures [EOP(s)]

Item	Safety Grade (Y or N)	Comment	SGTR Function	Functional Remark
SG PORVs (air operated) PV-2000 PV-2010 PV-2020	N[16]	See Attachment 2, Item 4 for SG PORV attributes. Valve status (open/closed) is verified using the MCB demand indicator and the MCB control switch light. Note 34 ESF Monitor Light on MCB also provides a RG 1.97 Category 2 valve position indication. Note 35 (FSAR Figure 5.1-1, Sht.2)	Ruptured SG Isolation RCS Cooldown	14 15, 16
EF Flow Control Valve (air operated) IFV-3531 IFV-3541 IFV-3551 IFV-3536 IFV-3546 IFV-3556	Y	See Attachment 2, Item 4 for EF flow control valve attributes. Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33 ESF Monitor Light on MCB also provides a RG 1.97 valve position indication. Note 35 (FSAR Figure 10.4-16)	EF Control Ruptured SG Isolation	17 18

Table 16. Equipment Credited for SGTR Mitigation in the VCSNS Emergency Operating Procedures [EOP(s)]

Item	Safety Grade (Y or N)	Comment	SGTR Function	Functional Remark
FW Isolation Valve XVG-1611A(B)(C)	Y	Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33 ESF Monitor Light on MCB also provides a RG 1.97 valve position indication. Note 35 (FSAR Figure 10.4-12)	FW Isolation	19, 20
TDEFP Steam Supply Flow Control Valve (air operated) IFV-2030	Y	Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33 (FSAR Figure 10.3-1)	Ruptured SG Isolation	21
SG Blowdown Isolation Valve (air operated) XVG-503A(B)(C)	Y	Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33 ESF Monitor Light on MCB also provides a RG 1.97 valve position indication. Note 35 (FSAR Figure 10.4-13)	Ruptured SG Isolation	23

Table 16. Equipment Credited for SGTR Mitigation in the VCSNS Emergency Operating Procedures [EOP(s)]

Item	Safety Grade (Y or N)	Comment	SGTR Function	Functional Remark
MS Drain Isolation Valve (air operated) XVT-2843A(B)(C) XVT-2877A(C)	Y	Valve status (open/closed) is verified using the MCB control switch light. Note 34 ESF Monitor Light on MCB also provides RG 1.97 valve position indication. Note 35 (FSAR Figure 10.3-1)	Ruptured SG Isolation	24
MS Isolation Valves XVM-2801A(B)(C)	Y	Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33 ESF Monitor Light on MCB also provides a RG 1.97 valve position indication. Note 35 (FSAR Figure 10.3-1)	Ruptured SG Isolation	25
MS Isolation Bypass Valve XVT-2869A(B)(C)	Y	Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33 ESF Monitor Light on MCB also provides a RG 1.97 valve position indication. Note 35 (FSAR Figure 10.3-1)	Ruptured SG Isolation	25

Table 16. Equipment Credited for SGTR Mitigation in the VCSNS Emergency Operating Procedures [EOP(s)]

Item	Safety Grade (Y or N)	Comment	SGTR Function	Functional Remark
Diesel Driven Air Compressor XAC-14	N	See Attachment 2, Item 4 for compressor attributes. (FSAR Figure 9.3-2)	RCS Cooldown	26, 27, 28
PZR PORV Block Valve XVG-8000A/B/C	Y	Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33	RCS Depressurization	29
PRZ PORV (air operated) PCV-445A/B PCV-444B	Y	See Attachment 2, Item 4 for PRZ PORV attributes. Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication. Note 33 (FSAR Figure 5.1-1, Sh.2)	RCS Depressurization	30, 31
High Head Injection Valves MVG-8801A(B)	Y	Valve status (open/closed) is indicated on the MCB by its associated control switch light. Note 33 ESF Monitor Light on MCB also provides RG 1.97 Category 2 valve position indication. Note 35 (FSAR Figure 6.3-1)	SI Termination	32

Remarks for Table 16:

1. One of many indicators of a SGTR.
2. Pressurizer pressure and level decrease for primary to secondary leak flows in excess of normal makeup.
3. During the RCS depressurization to equalize pressure with the ruptured SG, pressurizer level is restored.
4. Prior to terminating Safety Injection (SI), the operator verifies the RCS is subcooled, an adequate secondary heat sink exists (i.e., minimum required Emergency Feedwater (EF) flow is available or narrow range SG level is being maintained in at least one intact SG), RCS wide range pressure is stable or increasing, and pressurizer level is within the normal range.
5. Unless manually initiated by the Operator, SI actuation occurs on low pressurizer pressure.
6. The RCS is depressurized until wide range RCS pressure is less than ruptured SG pressure with pressurizer level within the normal range.
7. For a large SGTR, pre-trip feed flow to the ruptured SG decreases with constant or rising level in the ruptured SG.
8. Post-trip following EF isolation, ruptured SG level continues to rise until break flow is terminated.
9. EF flow is manually controlled to ensure the SG tubes remain covered within the ruptured SG and at the post-trip control level within the intact SGs.
10. The operator determines the core exit thermocouple cooldown target (i.e., temperature that will maintain the RCS subcooled when pressure is equalized between the RCS and ruptured SG) based on steam line pressure for the ruptured SG.
11. An adequate secondary heat sink is confirmed by ensuring the minimum required EF flow is being provided and level is available in at least one SG.
12. Designed and installed per NUREG-0578, Item 2.1.3.b and NUREG-0737, Item II.F.2. The 51 thermocouple signals are routed via two separate environmentally qualified, safety related channels. Circuits terminate at safety related thermocouple isolator cabinets in a cable spreading room directly below the control room. Fifty-one (51) isolated channels are then routed to the plant computer which is the primary display. Sixteen (16) dedicated channels (2/train/core quadrant) are isolated and separated from the computer circuits and are routed as associated safety related to the core subcooling margin monitor, which is the backup thermocouple display and a RG-1.97 Category 1 instrument.
13. Designed and installed per NUREG-0578, Item 2.1.3.b and NUREG-0737, Item II.F.2. Provides backup core exit thermocouple display.
14. The PORV on the ruptured SG is closed, using the MCB manual/auto controllers, to isolate flow from the ruptured SG. Closed position verified using its associated MCB Control Switch light.
15. The PORVs on the intact SGs are opened, using the MCB manual/auto controllers, to cool down the RCS.
16. The SG PORVs form part of the main steam pressure boundary upstream of the Main

Steam Isolation Valves (MSIVs), and thus are safety grade. The electrical and control air appurtenances for the SG PORVs are, however, non-safety grade. Each SG PORV can also be operated locally using a hand wheel. The valve operators and hand wheels are accessible from permanent platforms and are located within the Intermediate and Auxiliary Buildings at the 436-foot elevation.

17. The operator positions the EF flow control valves to control SG level in the intact SGs.
18. The operator closes the EF flow control valves to isolate flow to the ruptured SG once the SG tubes are covered. Valve status (open/closed) is verified using the MCB control switch light, a RG 1.97 Category 2 indication.
19. The Reactor Protection System provides a main feedwater isolation signal to A and B trains on low Tavg coincident with reactor trip [closes Feedwater Isolation Valves (FWIVs) only].
20. A safety injection signal causes closure of the FW isolation valves, FW control valves, and FW Bypass Control Valves and trip of the FW pumps.
21. If SG B or SG C is ruptured and at least one Motor Driven Emergency Feedwater Pump (MDEFP) is running (as indicated by the MCB RG 1.97 Category 2 motor amp indication, EF flow indications and pump status indication light), steam is isolated to the Turbine Driven Emergency Feedwater Pump (TDEFP) by closing its steam supply inlet valve (IFV02030).
22. Not used.
23. Part of Secondary System (SS) pressure boundary. Valves fail closed on loss of air or control power and are automatically closed on Phase A Containment Isolation or EF pump start. Operator confirms valve is closed on the ruptured SG using the MCB control switch light.
24. Operator closes main steam drain isolation valve(s) on ruptured SG from MCB to achieve isolation.
25. Part of the SS pressure boundary. Valves fail closed on loss of air or control power. Operator closes valve(s) on ruptured SG from MCB to achieve isolation.
26. Motive air is needed for the PORVs on the intact SGs to support cooldown of the RCS and for long term event recovery as discussed in Attachment 1, item 4.
27. On loss of offsite power, the normal Instrument Air compressors are lost
28. The diesel driven air compressor is automatically started in the event of a loss of power to the in-plant compressors or loss of instrument air header pressure.
29. At least one block valve must be verified as open or opened to make a pressurizer PORV available. This is accomplished from the MCB via inspection of its associated open/closed status light indication or operation of its associated safety grade control switch.
30. The pressurizer PORVs form part of the RCS pressure boundary upstream and are thus safety grade. Control switch lights on the MCB provide valve status and are RG-1.97, Category 2. The normal control function to manipulate these valves is classified as non-safety grade. Remote manual operation from the MCB is, however, provided by a Class IE circuit. Two of the three PORVs (PCV-444B & 445A) have a continuous back-up source of air in the form of air tanks inside containment. No operator action is required to align the back-up air supply.

31. One pressurizer PORV will be manually opened from the MCB to equalize RCS and ruptured SG pressure.
32. To terminate SI, the parallel cold leg injection valves (XVG-8801A/B) are closed from the MCB.
33. The valve is provided with a red light and a green light at the control switch to indicate valve position. The lights are based on limit switches on the valve to indicate actual valve position. Red light only indicates the valve is full open. Green light only indicates the valve is full closed. A red light and green light indicate the valve is somewhere in mid-stroke. The valve position is a RG 1.97 indication.
34. The valve is provided with a red light and a green light at the control switch to indicate valve position. The lights are based on limit switches on the valve to indicate actual valve position. Red light only indicates the valve is full open. Green light only indicates the valve is full closed. A red light and green light indicate the valve is somewhere in mid-stroke. The valve position is not a RG 1.97 indication.
35. ESF status lights for valve positions are separate from the valve control on the MCB. Each white status light panel is engraved with the valve number and position. If the status light is bright, the valve is in the engraved position. If the status light is dim, the valve is not in the engraved position. The status lights are driven by limit switches on the valve to provide actual valve position. The valve position is a RG 1.97 indication.

RAI No. 4

In Table 13, the licensee stated, "The CR ventilation emergency mode is initiated at 0.5 hours after the start of the accident." Is this an automatic or a manual action? If manual, describe the action including the alarm or cue that alerts the operator that action is necessary, the feedback that the action is working or not, the procedures that guide the action, and the time required to complete the action.

SCE&G Response

Within the Control Room (CR) dose calculations, credit is taken for control room filtration (i.e., with an assumed charcoal filtration efficiency of 95 percent). As described in Section 9.4.1 of the VCSNS updated FSAR, the control room ventilation system is automatically placed in the emergency mode, with filtration of incoming and recirculated air, following receipt of a SI or high radiation signal from the gaseous activity channel of RM-A1. Although very sensitive and fast acting, RM-A1 is not credited within any of the CR calculations due to lack of redundancy. The current licensing basis (CLB) analysis (FSAR Section 15.4.3) assumes the double-ended rupture of a single tube and predicts a reactor trip and SI actuation on low RCS pressure in approximately 6.5 minutes. The FSAR analysis does not examine break size affects as primary to secondary size leakage and consequently doses are maximized for a large double-ended rupture. A timely automatic SI actuation is, however, expected to occur for large to medium size SGTRs, and the operator is also required by procedure to initiate an SI for any tube leak that is outside of the capacity of the normal charging system. For the VCSNS Alternate Source Term analysis for SGTR, 30 minutes was conservatively assumed for the time after event initiation

for initiation of the emergency mode of operation. This timing assumption bounds the calculated times from the FSAR analyses and allows for substantial variation to cover break size effects, including the need to manually initiate SI. As indicated within the last paragraph within Section 3.4.2 of the enclosure to the LAR, a sensitivity study was performed crediting the emergency mode of operation 60 seconds after the SI signal. The calculated dose for this sensitivity is more indicative of the maximum expected CR dose for a design basis tube rupture.

RAI No. 5

In Attachment 1 of the licensee's submittal, it is stated that certain equipment can be locally controlled if needed, e.g. the SG PORVs, compressors XAC-3A/B, XAC-4A/B, and XAC-12, and the EFW flow control valves. Have the environmental conditions at those local control stations been confirmed as benign for plant operators during an SGTR event, especially regarding heat, humidity, steam, and radiation?

SCE&G Response

In order to provide an adequate response to RAI No. 5, VCSNS will perform additional engineering evaluations to assess the dose the operator will receive when (1) locally operating the SG PORVs and (2) when starting the diesel driven air compressor. Upon completion of the evaluations, VCSNS will provide its response to RAI No. 5 by January 30, 2015.

RAI No.6

The licensee has committed to include the timing of SGTR actions in the requalification training program. Why not also include it in the initial training program?

SCE&G Response

The operators are in class to learn how to perform the duties of a licensed operator. Early in the candidates' simulator training, the individuals spend a large amount of time searching for certain indications and controls. The candidates are not yet qualified (not licensed) and would more than likely give non-representative response time results if these scenarios were run during the class.

VCSNS time line validation procedure, OAP-101.3, specifies that the validation be performed with a crew of at least four individuals. The procedure also mandates that the Control Room Supervisor be a Senior Reactor Operator licensed individual while the two Main Control Room board operators must have at least Reactor Operator licenses. The fourth individual is required to be a Shift Manager or a Shift Engineer. This would not be the case with a crew in Initial License Operator (ILO) class, where the NRC simulator exams are conducted with teams of three candidates in accordance with NUREG-1021, ES 301, Revision 9:

"The simulator test is administered in a team format with up to three applicants (or surrogates) filling the RO and SRO license positions (as appropriate) on an operating crew. (Refer to ES-201, "Initial Operator Licensing Examination Process," for additional guidance on crew composition and ES-302 for test administration instructions.)"

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

ATTACHMENT II

FOLLOW-UP OBLIGATION

The following table identifies a follow-up obligation outlined by Virgil C. Summer Nuclear Station in this document. Please direct questions regarding this follow-up obligation to Mr. Bruce L. Thompson, Manager, Nuclear Licensing, (803) 931-5042.

FOLLOW-UP OBLIGATION	DUE DATE/EVENT
To provide an adequate response to RAI No. 5, VCSNS will perform additional engineering evaluations to assess the dose the operator will receive when (1) locally operating the Steam Generator PORVs and (2) when starting the diesel driven air compressor. CR-12-04269, Action 015	January 30, 2015